AMENDMENTS TO THE CLAIMS

1-21. (cancelled)

22. (currently amended) The method according to claim 39 21, wherein the cells include L-cells, and wherein configuring the signal comprises configuring the signal to stimulate the L-cells to increase the secretion of the GLP-1.

23. (currently amended) The method according to claim 39 21, wherein the site includes the colon, and wherein applying the signal comprises applying the signal to the colon.

24. (currently amended) The method according to claim 39 21, wherein the site includes the distal small intestine, and wherein applying the signal comprises applying the signal to the distal small intestine.

25. (currently amended) The method according to claim 39 21, further comprising selecting a subject suffering from obesity, and wherein applying the signal comprises applying the signal to the site of the selected subject.

26. (currently amended) The method according to claim 39 21, further comprising selecting a subject suffering from a condition selected from the group list consisting of [[:]] NIDDM, heart disease, and hypertension, and wherein applying the signal comprises applying the signal to the site of the selected subject.

27. (cancelled)

28. (currently amended) The method according to claim 39 21, wherein applying the signal comprises applying the signal periodically.

29. (currently amended) The method according to claim 39 21, wherein configuring the signal comprises varying at least one parameter of the signal in real time.

30. (currently amended) The method according to claim 39 21, wherein applying the signal comprises applying an excitable tissue control (ETC) signal to the site.

31. (original) The method according to claim 30, comprising sensing natural electrical activity of the site, wherein applying the ETC signal comprises applying the ETC signal responsive to the sensed natural electrical activity.

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32. (currently amended) ~~The method according to claim 21,~~

A method for treating a subject, comprising:

applying an electrical signal to a site of the subject selected from the group consisting of: a colon of the subject, and a distal small intestine of the subject; and

configuring the signal to stimulate cells of the subject to increase secretion of glucagon-like-peptide-1 (GLP-1), in order to treat the subject,

wherein configuring the signal comprises:

detecting an occurrence selected from the ~~list~~ group consisting of [[:]] an occurrence of eating, an occurrence of excessive eating, and an occurrence of an elevated blood glucose level; and

responsive to detecting the occurrence, increasing a strength of the signal.

33. (original) The method according to claim 32, wherein applying the signal comprises applying the signal in bursts of pulses, and wherein increasing the strength of the signal comprises increasing a frequency of the pulses in each of the bursts.

34. (original) The method according to claim 32, wherein applying the signal comprises applying the signal in bursts of pulses, and wherein increasing the strength of the signal comprises decreasing a spacing between successive bursts.

35. (currently amended) The method according to claim 39 ~~21~~, wherein applying the signal comprises applying the signal in bursts of pulses.

36. (original) The method according to claim 35, wherein configuring the signal comprises configuring a spacing between successive bursts to have a duration of between about 1 and about 10 seconds.

37. (original) The method according to claim 35, wherein configuring the signal comprises configuring a frequency of the pulses within each of the bursts to be between about 1 and about 200 Hz.

38. (original) The method according to claim 37, wherein configuring the signal comprises configuring a frequency of the pulses within each of the bursts to be between

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about 5 and about 50 Hz.

39. (currently amended) ~~The method according to claim 21,~~

A method for treating a subject, comprising:

applying an electrical signal to a site of the subject selected from the group consisting of: a colon of the subject, and a distal small intestine of the subject;

configuring the signal to stimulate cells of the subject to increase secretion of glucagon-like-peptide-1 (GLP-1), in order to treat the subject; and

~~comprising~~ detecting eating by the subject, wherein applying the electrical signal comprises applying the signal responsive to detecting the eating.

40. (currently amended) The method according to claim 39, wherein applying the signal responsive to detecting the eating comprises commencing applying the signal at a time selected from the ~~list~~ group consisting of [[:]] substantially simultaneously with a commencement of the eating, between about one and about 5 minutes after the commencement of the eating, and between about one and about 5 minutes prior to the commencement of the eating.

41. (original) The method according to claim 39, wherein detecting the eating comprises:

measuring an electrical impedance between two or more sites on a stomach of the subject, and generating an impedance signal responsive thereto;

detecting a change in posture of the subject by performing a posture analysis of the impedance signal;

detecting an indication of potential eating by the subject by performing an eating analysis of the impedance signal; and

responsive to the posture analysis, interpreting the impedance signal as indicative of the eating.

42. (original) The method according to claim 39, wherein detecting the eating comprises:

measuring an electrical impedance between two or more sites on a stomach of the subject, and generating an impedance signal responsive thereto;

comparing a measure of a sudden, sustained change in the impedance signal to a threshold; and

detecting the eating by analyzing the impedance signal, and responsive to the comparing.

43. (original) The method according to claim 39, wherein detecting the eating comprises analyzing an electrical measurement of the stomach, and, responsive to the analysis, determining whether an electrical event indicative of a slow wave has occurred.

44-94. (cancelled)

95. (currently amended) The apparatus according to claim 111 94, wherein the cells include L-cells, and wherein the control unit is adapted to configure the treatment signal to stimulate the L-cells to increase the secretion of the GLP-1.

96. (currently amended) The apparatus according to claim 111 94, wherein the site includes the colon, and wherein the control unit is adapted to apply the treatment signal to the colon.

97. (currently amended) The apparatus according to claim 111 94, wherein the site includes the distal small intestine, and wherein the control unit is adapted to apply the treatment signal to the distal small intestine.

98. (currently amended) The apparatus according to claim 111 94, wherein the control unit is adapted to configure the treatment signal to be suitable for treating a condition selected from the group list consisting of [[:]] obesity, NIDDM, heart disease, and hypertension.

99. (cancelled)

100. (currently amended) The apparatus according to claim 111 94, wherein the control unit is adapted to apply the treatment signal periodically.

101. (currently amended) The apparatus according to claim 111 94, wherein the control unit is adapted to vary at least one parameter of the treatment signal in real time.

102. (currently amended) The apparatus according to claim 111 94, wherein to apply

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the <u>treatment</u> signal, the control unit is adapted to apply an excitable tissue control (ETC) signal to the site.

103. (original) The apparatus according to claim 102, wherein the control unit is adapted to sense natural electrical activity of the site, and to apply the ETC signal responsive to the sensed natural electrical activity.

104. (currently amended) ~~The apparatus according to claim 94, wherein the control unit is adapted to:~~

~~detect an occurrence selected from the list consisting of: an occurrence of eating, an occurrence of excessive eating, and an occurrence of an elevated blood glucose level; and~~

<u>Apparatus for treating a subject, comprising:</u>

<u>at least one electrode, adapted to be coupled to a site of the subject selected from the group consisting of: a colon of the subject, and a distal small intestine of the subject;</u>

<u>a detection unit configured to detect an occurrence selected from the group consisting of: an occurrence of eating, an occurrence of excessive eating, and an occurrence of an elevated blood glucose level, and generate a detection unit signal in response thereto; and</u>

<u>a control unit, adapted to drive the at least one electrode to apply an electrical treatment signal to the site, and to configure the treatment signal to stimulate cells of the subject to increase secretion of glucagon-like-peptide-1 (GLP-1), in order to treat the subject, and</u>

responsive to ~~detecting~~ <u>receiving the detection unit signal indicative of the detected</u> ~~the~~ occurrence, increase a strength of the <u>treatment</u> signal.

105. (currently amended) The apparatus according to claim 104, wherein the control unit is adapted to apply the <u>treatment</u> signal in bursts of pulses, and to increase the strength of the <u>treatment</u> signal by increasing a frequency of the pulses in each of the bursts.

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106. (currently amended) The apparatus according to claim 104, wherein the control unit is adapted to apply the <u>treatment</u> signal in bursts of pulses, and increase the strength of the <u>treatment</u> signal by decreasing a spacing between successive bursts.

107. (currently amended) The apparatus according to claim <u>111</u> 94, wherein the control unit is adapted to apply the signal in bursts of pulses.

108. (original) The apparatus according to claim 107, wherein the control unit is adapted to configure a spacing between successive bursts to have a duration of between about 1 and about 10 seconds.

109. (original) The apparatus according to claim 107, wherein the control unit is adapted to configure a frequency of the pulses within each of the bursts to be between about 1 and about 200 Hz.

110. (original) The apparatus according to claim 109, wherein the control unit is adapted to configure the frequency of the pulses within each of the bursts to be between about 5 and about 50 Hz.

111. (currently amended) ~~The apparatus according to claim 94, wherein the control unit is adapted to detect eating by the subject, and~~

<u>Apparatus for treating a subject, comprising:</u>

<u>at least one electrode, adapted to be coupled to a site of the subject selected from the group consisting of: a colon of the subject, and a distal small intestine of the subject;</u>

<u>a detection unit adapted to detect eating by the subject, and generate a detection unit signal in response thereto; and</u>

<u>a control unit, adapted to drive the at least one electrode</u> to apply ~~the~~ <u>an</u> electrical <u>treatment</u> signal <u>to the site</u> responsive to <u>receiving the detection unit signal indicative of the detected</u> ~~detecting the~~ eating<u>, and to configure the treatment signal to</u>

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stimulate cells of the subject to increase secretion of glucagon-like-peptide-1 (GLP-1), in order to treat the subject.

112. (currently amended) The apparatus according to claim 111, wherein to apply the treatment signal responsive to receiving the detection unit signal indicative of the detected detecting the eating, the control unit is adapted to commence applying the treatment signal at a time selected from the list group consisting of [[:]] substantially simultaneously with a commencement of the eating, between about one and about 5 minutes after the commencement of the eating, and between about one and about 5 minutes prior to the commencement of the eating.

113. (currently amended) The apparatus according to claim 111, wherein to detect the eating, the control unit detection unit is adapted to:

measure an electrical impedance between two or more sites on a stomach of the subject, and generate an impedance signal responsive thereto,

detect a change in posture of the subject by performing a posture analysis of the impedance signal,

detect an indication of potential eating by the subject by performing an eating analysis of the impedance signal, and

responsive to the posture analysis, interpreting the impedance signal as indicative of the eating.

114. (currently amended) The apparatus according to claim 111, wherein to detect the eating, the control unit detection unit is adapted to:

measure an electrical impedance between two or more sites on a stomach of the subject, and generate an impedance signal responsive thereto,

compare a measure of a sudden, sustained change in the impedance signal to a threshold, and

detect the eating by analyzing the impedance signal, and responsive to the comparing.

115. (currently amended) The apparatus according to claim 111, wherein to detect the eating, the control unit detection unit is adapted to analyze an electrical measurement of

the stomach, and, responsive to the analysis, determine whether an electrical event indicative of a slow wave has occurred.

116-149. (cancelled)